# FINAL EXPRESS TERMS
# FOR PROPOSED BUILDING STANDARDS
# OF THE CALIFORNIA BUILDING STANDARDS COMMISSION
# REGARDING THE 2019 CALIFORNIA PLUMBING CODE,
# CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5

## (BSC 04/18)

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

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**LEGEND FOR EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)**

1. Model Code language appears upright.
2. Existing California amendments appear in *italics*.
3. Amended model code or new California amendments appear *underlined and in italics*.
4. Repealed model code language appears ~~upright and in strikeout~~.
5. Repealed California amendments appear in ~~*italics* and *strikeout*~~.

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## FINAL EXPRESS TERMS

The California Building Standards Commission (BSC) proposes to adopt the 2018 edition of the Uniform Plumbing Code (UPC) for codification and effectiveness into the 2019 edition of the California Plumbing Code (CPC) as presented in the following pages, including necessary amendments. BSC further proposes to:

Repeal the 2015 edition of the UPC;

Repeal amendments to the model code that are no longer necessary, amend building standards that are not addressed by a model code;

Relocate or codify existing adopted and necessary amendments to the model code, into the format of the model code proposed for adoption, the action of which has no regulatory effect;

Adopt new necessary amendments to the model code proposed for adoption; and/or

Adopt new building standards that are not addressed by the model code proposed for adoption.

## PROPOSED REPEALS, ADOPTIONS AND NEW AMENDMENTS

**ITEM 1. BSC proposes to bring forward existing California amendments in *Chapter 1, Division I* through Chapter 1, *Division II* from the 2016 California Plumbing Code for adoption into the 2019 edition of the California Plumbing Code with additional amendments as follows:**

***Chapter 1***
***California Administration***
***Division I***

***1.1.0 General***

***1.1.1 Title.*** *These regulations …*
*This part incorporates by adoption the ~~2015~~ 2018 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.*
*. . .*
***1.1.3.2 State-Regulated Buildings, Structures, and Applications.*** *The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to the following buildings, structures, and applications regulated by state agencies as specified in Sections 1.2.0 through 1.14.0, except where modified by local ordinance pursuant to Section 1.1.8. When adopted by a state agency…*
*. . .*

***1.1.8.2 Locally Adopted Energy Standards – California Energy Code, Part 6.*** *In addition to the provision of Section 1.1.8.1 of this ~~P~~part, the provisions of this section ~~applies~~ apply to cities, counties, and ~~city~~ cities and ~~county~~ counties amending adopted energy standards affecting buildings and structures subject to the California Energy Code, Part 6.*

**Notation**
Authority: Health and Safety Code §18934.5, 18949.6
References: Health and Safety Code §18934.5, 18949.6

**ITEM 2. BSC proposes to not adopt CHAPTER 1 of the 2018 UPC for use in the 2019 CPC as *Division II*.**

**ADMINISTRATION**
**Chapter 1 (2018 UPC) - *DIVISION II (2019 CPC)***

. . .

**Notation:**
Authority: Health and Safety Code §18934.5, 18949.6
References: Health and Safety Code §18934.5, 18949.6

**<u>ITEM 3</u>. BSC proposes to adopt the entire Chapter 2 of the 2018 UPC as amended, to carry forward existing amendments (including the deletion of some model code definitions), and to delete a California definition, for use in the 2019 CPC (applicable to both BSC and BSC-CG, as specified below).**

**CHAPTERS 2**
**DEFINITIONS**

**. . .**

**205.0** -**C**-

**. . .**

***Complex System [BSC-CG].*** *Gray water systems that …*

**. . .**

***Construction Site [BSC-CG].*** *A parcel of land …*

**. . .**

**206.0** -**D**-

**….**

***Disinfected Tertiary Recycled Water [BSC-CG].*** *Filtered and subsequently disinfected wastewater…*

***Disposal Field [BSC-CG].*** *An intended destination for gray water including but …*

**. . .**

**207.0** -**E**-

**. . .**

***Enforcing Agency [BSC, BSC-CG].*** *"Enforcing Agency" is the designated …*

**. . .**

**209.0** -**G**-

**. . .**

***Graywater [BSC-CG].*** *Pursuant to Health and Safety Code Section 17922.12…*
***Gray Water System [BSC-CG].*** *A system designed to collect gray water …*

**. . .**

**211.0** -**I**-

**. . .**

***Irrigation Field [BSC-CG].*** *An intended destination for graywater in the receiving …*

**. . .**

**215.0** -**M**-

***Mulch Basin [BSC-CG].*** *A subsurface type of irrigation or disposal field filled with…*

**. . .**

**217.0 –O–**

**. . .**

***On-Site Treated Nonpotable Water [BSC-CG].*** *Nonpotable water that has been…*

**. . .**

**220.0 -R-**

**. . .**

***Rainwater [BSC-CG].*** *Precipitation on any public or private parcel that has not …*

***Rainwater Catchment System [BSC-CG].*** *A facility designed to capture, retain, and…*

***Receiving Landscape [BSC-CG].*** *Includes features such as …*

***Reclaimed (Recycled) Water [BSC-CG].*** *Nonpotable water that meets California …*

***Recycled Water Supply System [BSC-CG].*** *The building supply pipe, the water …*

**. . .**

**221.0 -S-**

**. . .**

***Simple System [BSC-CG].*** *A gray water system serving …*

**. . .**

**222.0 -T-**

**. . .**

***Treated Gray Water [BSC-CG].*** *Non-potable water meeting the definition of …*

**-U-**

**223.0**

**. . .**

~~***Urinal, Hybrid [BSC-CG].*** *A urinal that conveys waste into the drainage system without the use of water for flushing and automatically performs a drain-cleansing action after a predetermined amount of time as defined in Chapter 2 of the California Green Building Standards Code (CALGreen).*~~

**Notation:**
Authority: Health and Safety Code Sections 18928, 18930.5, 18941.8
Reference: Health and Safety Code Section 18941.8, Water Code Section 14877.1

**ITEM 4. BSC proposes to adopt the entire Chapter 3 of the 2018 UPC with an editorial amendment, as listed below.**

## CHAPTER 3
## GENERAL REGULATIONS

. . .

**309.5 Sound Transmission.** Plumbing piping systems shall be designed and installed in conformance with sound limitations as required in the ~~building code~~ *California Building Code*.

. . .

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 5. BSC proposes to adopt the entire Chapter 4 of the 2018 UPC (for BSC and BSC-CG, as applicable), and to carry forward existing amendments with new editorial changes to Sections 408.5 and 422.1.**

## CHAPTER 4
## PLUMBING FIXTURES AND FIXTURE FITTINGS

. . .

***401.3 Water-Conserving Fixtures and Fittings. Note 1: [BSC]*** *Flow rates for specified plumbing fixtures…*

. . .

**408.5 Finished Curb or Threshold.** Where a shower receptor has a finished dam… The immediate adjoining space to showers without thresholds shall be considered a wet location and shall comply with the requirements of the ~~building, residential, and electrical codes~~ *California Building Code, California Residential Code, and California Electrical Codes.*

***412.1.1 Wall Mounted Urinals. [BSC-CG].*** *The effective flush volume of wall…*

***412.1.2 Floor Mounted Urinals [BSC-CG].*** *The effective flush volume of floor…*

. . .

***412.1.3.1 Urinals, Hybrid [BSC-CG].*** *Where approved, hybrid urinals shall…*

. . .

**422.1 Fixture Count.** Plumbing fixtures shall be provided for the type of building occupancy and in the minimum number shown in Table 422.1 *and Tables 4-2 and 4-3.* The total occupant load and occupancy classification shall be determined in accordance with ~~Occupant Load Factor Table A and~~ the *California Building Code* ***[BSC]***

*or Occupant Load Factor Table A*. Occupancy classification not shown in Table 422.1 shall be considered separately by the Authority Having Jurisdiction.

**. . .**

**Table 422.1 MINIMUM PLUMBING FACILITIES…**

**. . .**

***Table A. OCCUPANCY LOAD FACTOR [BSC]***

***. . .***

***Table 4-3 and Table 4-4***

**ITEM 6. BSC proposes to adopt the entire Chapter 5 of the 2018 UPC without amendment (for BSC).**

## CHAPTER 5
## WATER HEATERS

**. . .**

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 7. BSC proposes to adopt the entire Chapter 6 as amended (amended sections listed below) of the 2018 UPC, and to carry forward existing amendments (for BSC and BSC-CG, as applicable).**

## CHAPTER 6
## WATER SUPPLY AND DISTRIBUTION

**. . .**

**601.3.3 Alternate Water Sources.** Alternate water source systems shall have…

(1) Gray water systems shall be marked in accordance with…

(2) Reclaimed (recycled) water systems *for outdoor applications* shall be marked in accordance with this section with the words: "CAUTION: NONPOTABLE RECLAIMED (RECYCLED) WATER, DO NOT DRINK" in black letters.

**. . .**

## TABLE 604.1
## MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION WATER PIPING AND FITTINGS

*[No changes to table]*

**Notes:**

1. For Building Supply or exterior cold-water applications, not for water distribution piping.

2. For brazed fittings only.

*~~2~~3. When PEX tubing is placed in soil and is used in potable water systems intended to supply drinking water to fixtures or appliances, the tubing or piping shall be sleeved with a material approved for potable water use in soil or other material that is impermeable to solvents or petroleum products.*

*~~3~~4. PEX tubing shall meet or exceed the requirements of ASTM F876~~-2013a~~ 2015a or an equivalent or more stringent standard when used in continuously recirculating hot water systems and the PEX tubing is exposed to the hot water 100% of the time.*

*~~4~~5. The use of PEX-AL-PEX in potable water supply systems is not adopted.*

***. . .***

**604.13 Water Heater Connections.** Flexible metallic (copper and stainless steel) …
***[BSC]*** *PEX-AL-PEX is not adopted for use in potable water supply and distribution systems.*

*. . .*

**605.10 PEX-AL-PEX Plastic Tubing and Joints.** PEX-AL-PEX plastic pipe or tubing…
***[BSC]*** *PEX-AL-PEX is not adopted for use in potable water supply and distribution systems.*

**605.10.1 Mechanical Joints.** Mechanical joints between PEX-AL-PEX tubing and…
***[BSC]*** *PEX-AL-PEX is not adopted for use in potable water supply and distribution systems.*

**605.10.1.1 Compression Joints.** Compression joints shall include…
***[BSC]*** *PEX-AL-PEX is not adopted for use in potable water supply and distribution systems.*

***. . .***

**607.1 General.** Potable water supply tanks shall be installed in accordance with the manufacturer's installation instructions and supported in accordance with the ~~building code~~ *California Building Code*.

**TABLE 610.3**
**WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPES SIZES[3]**

| APPLIANCES, APPURTENANCES OR FIXTURES[2] | MINIMUM FIXTURE BRANCH PIPE SIZE [1,4] (inches) | PRIVATE | PUBLIC | ASSEMBLY[6] |
|---|---|---|---|---|
| ~~*Urinal, Hybrid*~~ | ~~½~~ | ~~*1.0*~~ | ~~*1.0*~~ | ~~*1.0*~~ |

*[Portions of Table 610.3 not shown remain unchanged]*

**Notation:**
Authority: HSC Sections 18928, 18928.1, 18930.5, 18934.5, and 18940.5
Reference: HSC Sections 18928.1, and 18940.5

**ITEM 8. BSC proposes to adopt the entire Chapter 7 SANITARY DRAINAGE, and to carry forward existing amendments with modification as follows (for BSC and BSC-CG, as applicable):**

**CHAPTER 7**
**SANITARY DRAINAGE**

**. . .**

**TABLE 702.1**
**DRAINAGE FIXTURE UNIT VALUES (DFU)**

| PLUMBING APPLIANCES, APPURTENANCES, OR FIXTURES | MINIMUM SIZE TRAP AND TRAP ARM[7] (inches) | PRIVATE | PUBLIC | ASSEMBLY[8] |
|---|---|---|---|---|
| ~~*Urinal, Hybrid*~~ | ~~*2*~~ | ~~*1.0*~~ | ~~*1.0*~~ | ~~*1.0*~~ |

*[Portions of Table 702.1 not shown remain unchanged]*

**Notation:**
Authority: HSC Sections 18928, 18928.1, 18930.5, 18934.5 and 18940.5
Reference: Health and Safety Code Section 18928.1 and 18940.5

**ITEM 9. BSC proposes to adopt the entire CHAPTER 8 INDIRECT WASTES, CHAPTER 9 VENTS, and CHAPTER 10 TRAPS AND INTERCEPTORS, of the 2018 UPC without amendment.**

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 10. BSC proposes to adopt the entire Chapter 11 of the 2018 UPC, and carry forward existing amendments from the 2016 CPC for use in the 2019 CPC.**

## CHAPTER 11
## STORM DRAINAGE

**1101.4 Material Uses.** Pipe, tube, and fittings conveying **. . .**
**. . .**

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 11. BSC proposes to adopt the entire Chapter 12 of the 2018 UPC without amendment.**

## CHAPTER 12
## FUEL PIPING

**. . .**

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 12. BSC proposes to not adopt Chapter 13 of the 2018 UPC.**

## CHAPTER 13
## HEALTH CARE FACILITIES AND MEDICAL GAS AND VACUUM SYSTEMS

**. . .**

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 13. BSC proposes to not adopt Chapter 14 of the 2018 UPC.**

## CHAPTER 14
## FIRESTOP PROTECTION

**. . .**

**Notation:**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 14. BSC proposes to adopt the entire Chapter 15 of the 2018 UPC with amendments as follows, and to carry forward existing amendments (for BSC and BSC-CG, as specified).**

## CHAPTER 15
## ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS

~~*Intent*~~
~~*The provisions of this chapter are intended to:*~~
~~*1. Conserve potable water by facilitating greater reuse of laundry, shower, lavatory and similar sources of discharge, or by the use of alternate water sources, where available.*~~
~~*2. Reduce the number of non-compliant gray water systems by making legal compliance easily achievable.*~~
~~*3. Provide guidance for avoiding potentially unhealthful conditions.*~~
~~*4. Provide an alternative way to relieve stress on a private sewage disposal system by diverting the gray water.*~~

**1501.2 System Design.** Alternate water source systems shall be designed …

***(BSC-CG)*** *Irrigation design plans shall meet the requirements of the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.*

**Exceptions:**
(1) A registered design professional is not required to design gray water systems …
(2) A registered design professional is not required to design an on-site treated…
~~(3) *Irrigation design plans shall meet the requirements of the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance.*~~

**. . .**

**1501.3 Permit.** It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered an alternate water source system in a building or on a premise without first obtaining a permit to do such work ~~*from the Authority Having Jurisdiction*~~ from the Authority Having Jurisdiction.
*No changes or connections shall be made to either the alternate water source system or the potable water system within a site containing an alternate water source system without approval by the Authority Having Jurisdiction.*

***Exception: (BSC-CG)*** *A construction permit shall not be required for a clothes washer system meeting the requirements of Section ~~1502.1.1~~ 1503.1.1.*

## TABLE 1501.5 *[BSC-CG]*
## *RECOMMENDED* MINIMUM ALTERNATE WATER SOURCE TESTING, INSPECTION AND MAINTENANCE FREQUENCY

*[No changes to table]*

***1501.5.1*** **Maintenance Responsibility.** The required maintenance and inspection of alternate water source systems …

**. . .**

**1501.6 Operation and Maintenance Manual**. An operation and maintenance manual for gray water, on-site treated *nonpotable* water, *and recycled water supply* systems required to have a permit in accordance with Section 1501.3*, Section 1503.2 and Section ~~1504.2~~ 1506.2* shall be supplied to the building owner …

**1501.7 Minimum Water Quality Requirements.** The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. *Water quality requirements for on-site treated nonpotable graywater shall comply with Section ~~1504.10.2~~ 1506.9.2. Recycled water shall comply with the water quality requirements of Section ~~1503.14~~ 1505.14.*

**Exception:** Water treatment is not required for gray water used *in a disposal field or* for subsurface *or subsoil* irrigation.

**. . .**

***1501.~~10~~9 Signage.*** *Signage for on-site treated nonpotable gray water shall comply with Sections ~~1501.10.1~~ 1501.9.1 and ~~1501.10.2~~ 1501.9.2. Signage for reclaimed (recycled) water shall comply with Section ~~1503.12~~ 1505.12.*

**1501.~~10~~*9.1* Commercial, Industrial, Institutional*, and Residential* Restroom Signs.** A sign shall be installed in restrooms in commercial, industrial, and institutional occupancies*, and in residential common use areas* using on-site treated *nonpotable gray* water for water closets, urinals, or both. *Signs shall comply with all applicable requirements of the California Building Code*. Each sign shall contain the following text:

TO CONSERVE WATER, THIS BUILDING USES *ON-SITE TREATED NONPOTABLE GRAY WATER* TO FLUSH TOILETS AND URINALS.

**1501.~~10~~*9.2* Equipment Room Signs.** Each room containing on-site treated *nonpotable gray* water equipment shall have a sign posted in a location that is visible to anyone working on or near nonpotable *gray* water equipment with the following wording in 1 inch (25.4 mm) letters:

CAUTION: *ON-SITE TREATED* NONPOTABLE *GRAY WATER*, DO NOT DRINK. DO NOT CONNECT TO DRINKING WATER SYSTEM. NOTICE: CONTACT BUILDING MANAGEMENT BEFORE PERFORMING ANY WORK ON THIS WATER SYSTEM.

**1501.10 System Controls (Formerly 1501.9).** Controls for pumps, valves, and…

**. . .**

**1502.1 General (Formerly 1501.11 Inspection and Testing).** Alternate water source systems shall be inspected and tested in accordance with Section 1502.2 and Section ~~1502.3.4~~ *1502.3.3* *and/or as required by the Authority Having Jurisdiction*.

**1502.2 Supply System Inspection and Test (formerly 1501.11.1).** Alternate water source systems shall be inspected and tested in accordance with…

**1502.3 (Formerly 1501.11.2) Cross-Connection Inspection and Testing.** An initial inspection and test shall be performed on both the potable and alternate water source systems. The potable and alternate water source system shall be isolated from each other and independently inspected and tested to ensure there is no cross-connection in accordance with Section 1502.3.1 through Section ~~1502.3.4~~. *1502.3.3*.

**1502.4 (Formerly 1501.12) Separation Requirements.** Underground alternate water source service piping other than gray water shall be separated from the building …

**1502.5 (Formerly 1501.13) Abandonment.** Alternate water source systems…

**1502.6 (Formerly 1501.14) Sizing.** Unless otherwise provided for in this…
…

**1503.0 (Formerly 1502.0) Gray Water Systems.** *Gray water systems shall be …*

**1503.1 (Formerly 1502.1) General.** The provisions of this section shall apply to the construction, alteration, and repair of gray water systems. *A city, county, or city and county …*

*(A) All gray water systems …*
*(B) Water used to wash diapers …*
*(C) Gray water shall not be used in spray irrigation…*
*(D) Human contact with gray water or the soil irrigated by gray water shall be minimized and avoided, except as required to maintain the gray water system. The discharge point of any gray water subsoil irrigation or subsurface irrigation field shall be covered by at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield to minimize the possibility of human contact.*

***1503.1.1*** ~~**1502.1.1**~~ [*Reserved for HCD]*

***1503.1.2*** ~~***1502.1.2***~~ ***Simple System.*** *Simple systems exceed a clothes washer system and shall comply with the following:*

*(1) The discharge capacity of a gray water system shall be determined by Section ~~1502.8~~ 1503.8. Simple systems have a discharge capacity of 250 gallons (947 L) per day or less.*
*(2) Simple systems shall require a construction permit…*
*(3) The design of simple systems shall meet …*

***1503.1.3 ~~1502.1.3~~ Complex System.*** *Any gray water system that is not a clothes washer system or simple system shall comply with the following:*

*(1) The discharge capacity of a gray water system shall be determined by Section ~~1502.8~~ 1503.8. Complex systems have a discharge capacity over 250 gallons (947 L) per day.*

*(2) Complex systems shall require a construction permit unless …*

**. . .**

**1503.3 (Formerly 1502.3) Connections to Potable and Reclaimed (Recycled) Water Systems.** Gray water systems shall have no direct connection to a potable water…

***Exceptions:***

*(1)* Potable *water*, on-site treated nonpotable *water*, reclaimed (recycled) water…

*(2) A potable water supply may be connected temporarily for initial testing of the untreated graywater system as required in Section ~~1501.11.2.2~~ 1502.3.2.*

**. . .**

**1504.3 (Formerly 1502.10.2) Determination of Maximum Absorption Capacity.** The irrigation field and mulch basin size shall be based …

***Exceptions:***

*(1) The Enforcing Agency may waive the requirement for identification of …*

*(2) Irrigation fields in compliance with Section ~~1502.11.2~~ 1504.5 which only utilize drip type emitters are exempt from percolation tests.*

**. . .**

***1504.5 ~~1502.11~~ Irrigation, Disposal Field and Mulch Basin Construction.***
*Irrigation fields, disposal fields and mulch basins used in gray water systems …*

***1504.5.1 ~~1502.11.1~~ Mulch Basin.*** *A mulch basin may be used as an irrigation or disposal field. Mulch basins shall be sized in accordance with Table ~~1502.10~~ 1504.2 and of sufficient depth, length and width to prevent ponding or runoff during the gray water surge of a clothes washer, bathtub or shower. Mulch must be replenished as required due to decomposition of organic matter. Mulch basins will require periodic maintenance, reshaping or removal of dirt to maintain surge capacity and to accommodate plant growth and prevent ponding or runoff.*

***1504.5.2 ~~1502.11.2~~ Irrigation Field.*** *The provisions of this section are not intended to prevent the use of any appropriate material, appliance, installation, device, design or method of construction. If an alternate design is not available, the following provisions may be used as guidance in the design of a gray water irrigation field:*

*(1) Filters used in gray water irrigation systems …*

*(2) Emitters shall be designed to resist …*

*(3) Each irrigation zone shall be designed to include no less than the number of emitters specified in Table ~~1502.11~~ 1504.5.5 or through a procedure designated*

*by the Enforcing Agency. Minimum spacing between emitters in any direction shall be sufficient to prevent surfacing or runoff.*

*(4) The system design shall provide user controls…*

*(5) All drip irrigation supply lines …*

*(6) Where pressure at the discharge side of the pump …*

*(7) When an irrigation system utilizes a pump…*

**. . .**

***1504.5.3 ~~1502.11.3~~ Disposal Field.*** *The provisions of this section are not intended to prevent the use of any appropriate material, appliance, installation, device, design or method of construction. If an alternate design is not available, the following provisions may be used as guidance in the design of a gray water disposal field:*

*(A) Disposal systems shall be not less than three (3) inches (80 mm) in cross sectional dimension and shall be constructed of perforated high-density polyethylene pipe, perforated ABS pipe, perforated PVC pipe, leaching chambers or other approved materials, provided that sufficient openings are available for distribution of the gray water into the trench area. Material, construction, and perforation shall be in compliance with the appropriate absorption field's drainage standards and shall be approved by the Enforcing Agency.*

*(B) Filter material, clean stone, gravel, slag, or similar filter material …*

***Exception:*** *Manufactured leaching chambers shall be installed in compliance with the manufacturer's installation instructions.*

*(C) Disposal fields shall be constructed in accordance with Table ~~1502.11.3~~ 1504.7.3.*

*(D) When necessary on sloping ground to prevent excessive line slopes…*

**. . .**

**Table 1504.5.5 (formerly Table 1502.11) Subsurface Irrigation Design Criteria for Six Typical Soils** (no changes to table)

**Table 1504.7.3 (formerly 1502.11.3) Subsoil Irrigation Field Construction** (no changes to table)

**1504.9 (Formerly 1502.13) Other Collection and Distribution Systems.** Other collection and distribution systems shall be approved as allowed by Section 301.3 of this code.

***1504.9.1 ~~1502.13.1~~ Future Connections.*** *Gray water stub-out plumbing may be allowed for future connection prior to the installation of irrigation lines and landscaping. Stub-out shall be permanently marked "CAUTION: NONPOTABLE GRAY WATER, DO NOT DRINK."*

**1505.0 Reclaimed (Recycled) Water Systems. (Not adopted by BSC)**

**1506.0 On-Site Treated Nonpotable *Gray* Water Systems.**

**1506.1 (Formerly 1504.1) General.** The provisions of this section shall apply to the installation, construction, alteration, and repair of on-site treated nonpotable *gray* water systems…

**1506.2 (Formerly 1504.2) Plumbing Plan Submission.** No permit for an on-site …

*Prior to commencing the issuance of permits for indoor gray water systems…*

**1506.3 (Formerly 1504.3) System Changes.** No changes or connections …

**1506.4 (Formerly 1504.4) Connections to Potable or Reclaimed (Recycled) Water Systems.** On-site treated nonpotable *gray* water systems shall have no *…*

***Exceptions:***
*(1)* Potable or reclaimed (recycled) water is permitted to be used as makeup water …
*(2) A potable water supply may be connected temporarily for initial testing of the on-site treated nonpotable gray water system as required in Section ~~1501.11.2.2~~ 1502.3.2.*

**1506.9 (Formerly 1504.10) Design and Installation.** The design and installation of on-site treated nonpotable *gray water* systems shall be in accordance with Section 1506.9.1 through Section ~~1506.9.5~~ ~~*1504.10.6*~~ *1506.9.6.*

**1506.9.1 (Formerly 1504.10.1) Listing Terms and Installation Instructions.** On-site treated nonpotable *gray* water systems …

**1506.9.2 (Formerly 1504.10.2) Minimum Water Quality.** On-site treated nonpotable *gray* water supplied to toilets or urinals or for other uses …

**1506.9.3 (Formerly 1504.10.3) Deactivation and Drainage.** The on-site treated nonpotable *gray* water system and the potable water system …

**1506.9.4 (Formerly 1504.10.4) Near Underground Potable Water Pipe.** On-site treated nonpotable *gray* water pipes shall be permitted to be run …

**1506.9.5 (Formerly 1504.10.5) Required Filters.** A filter permitting the passage …

***1506.9.6*** ~~***1504.10.6***~~ ***Disinfection.*** *Where the intended use of onsite treated …*

**1506.11 (Formerly 1504.11) Signs.** Signs in buildings using on-site treated nonpotable *gray* water shall comply with Sections 1501.9*,* ~~and Section~~ 1501.9.1, ~~*and Section 1501.10.2*~~ *1501.9.2, and applicable requirements of the California Building Code.*

**Notation**
Authority: Health and Safety Code Sections 18928, 18930.5, 18941.8
Reference: Health and Safety Code Section 18941.8, Water Code Section 14877.1

**ITEM 15. BSC proposes to adopt the entire Chapter 16 of the 2018 UPC with amendments as follows, and to carry forward existing amendments (for BSC only).**

## CHAPTER 16
## NONPOTABLE RAINWATER CATCHMENT SYSTEMS

**1601.0 General.**

**1601.1 Applicability.** The provisions of this chapter shall apply to the installation, construction, alteration, and repair of nonpotable rainwater catchment systems. ~~*In addition, applicable provisions in Chapter 15, Section 1501.7 for "Alternate Water Sources for Nonpotable Applications" shall apply to rainwater catchment systems.*~~

**1601.2 System Design**. Rainwater catchment systems shall be designed in accordance with this chapter by a person registered or licensed to perform plumbing design work or who demonstrates competency to design the rainwater catchment system as required by the Authority Having Jurisdiction ~~*by a person who demonstrates competency to design the alternate water source system as required by the Enforcing Agency. The Enforcing Agency may also require plans and specifications to be prepared by a licensed design professional*~~. Components, piping, and fittings used in a rainwater catchment system shall be listed.

**1601.3 Permit.** It shall be unlawful …
**. . .**

**1601.5 (Formerly 1601.4) Maintenance and Inspection.** Rainwater catchment systems and components shall be inspected and maintained in accordance with *the manufacturer's recommendations and/or as required by the enforcing agency*.

> ***1601.5.1*** ~~**1601.5.3**~~ **Maintenance Responsibility.** The required maintenance and inspection of rainwater catchment systems shall be the responsibility of the property owner unless otherwise required by the Authority Having Jurisdiction.

**1601.6 (Formerly 1601.5) Operation and Maintenance Manual.** An operation and maintenance manual for rainwater catchment systems …

**1601.7 (Formerly 1601.6) Minimum Water Quality Requirements.** The minimum water quality for rainwater catchment systems shall comply with the applicable water quality requirements for the intended application as determined by Authority Having Jurisdiction. Water quality for nonpotable rainwater catchment systems, shall comply

with Section 1602.9.6. *In the absence of water quality requirements for harvested rainwater, Table ~~1602.9.4~~ 1602.9.6 shall apply.*

***Exceptions:***
(1) Water treatment is not required …
(2) Water treatment is not required …

**1602.0 Nonpotable Rainwater Catchment Systems.**

**1602.9.6 (Formerly 1602.9.4) Minimum Water Quality.** (No change to text)

***1602.9.6.1 ~~1602.9.4.1~~ Disinfection.*** *Where the initial quality of the collected rainwater requires disinfection or other treatment or both, the collected rainwater shall be treated as necessary to ensure the required water quality is delivered at the point of use. Where chlorine is used for disinfection or treatment, water shall be tested for residual chlorine in accordance with ASTM D1253. The levels of residual chlorine shall not exceed the levels allowed for the intended use in accordance with the requirements of the local Enforcing Agency.*

**TABLE 1602.9.6 (Formerly 1602.9.4)**

| MINIMUM WATER QUALITY Application | Minimum Treatment | Minimum Water Quality |
|---|---|---|
| *Surface*, subsurface and drip irrigation | • Debris excluder or other approved means in accordance with Section 1602.9.10, and 100 microns *(100 µm)* in accordance with Section 1602.9.11 for drip irrigation. | N/A |
| Spray irrigation where the maximum storage volume is less than 360 gallons (*1363 L*) | • Debris excluder or other approved means in accordance with Section 1602.9.10~~, and disinfection in accordance with Section 1602.9.8~~. | N/A |

For SI units: 1 micron = 1 µm, 1 gallon = 3.785L
*[Portions of the table not shown remain without modification.]*

**1603.0 (Formerly 1602.9.5) Rainwater Storage Tanks.**
**. . .**

**1603.4 (Formerly 1602.9.5.3) Above Grade.** Above grade, storage tanks shall be …

***Exception:*** *Tanks may be installed directly on grade in accordance with 1601.3*

. . .

**1603.15 (Formerly 1602.9.11) Required Filters.** A filter permitting the passage of particulates not larger than 100 microns (100 µm) shall be provided for rainwater supplied to water closets, urinals, trap primers, and drip irrigation systems.

. . .

**1604.0 Signs.**

. . .

**1604.2 (Formerly 1602.10.1) Commercial, Industrial, Institutional, *and Residential* Restroom Signs.** A sign shall be installed in restrooms in commercial, industrial, and institutional occupancies*, and in residential common use areas* ~~*restrooms*~~ using nonpotable rainwater for water closets, urinals, or both. *Signs shall comply with all applicable requirements of the California Building Code.* Each sign shall contain the following text:

TO CONSERVE WATER, THIS BUILDING USES RAINWATER TO FLUSH TOILETS AND URINALS.

. . .

**1605.0 Inspection and Testing.**

. . .

**1605.3 (Formerly 1602.11.2) Cross-Connection Inspection and Testing.** An initial inspection and test in accordance with Section 1602.5 shall be performed on both the potable and rainwater catchment water systems. The potable and rainwater catchment water systems shall be isolated from each other and independently inspected and tested to ensure there is no cross-connection in accordance with Section 1605.3.1 through Section ~~1605.3.4~~ *1605.3.3*.

**1605.3.2 (Formerly 1602.11.2.2) Cross-Connection Test.** ~~The procedure for determining cross-connection shall be followed by the applicant~~ *A cross-connection test shall be performed* in the presence of the Authority Having Jurisdiction ~~and~~ *or* other authorities having jurisdiction to determine whether a cross connection has occurred as follows:

(1) The potable water system shall be activated and pressurized…
(2) The potable water system shall remain pressurized for a minimum period …
(3) Fixtures, potable, and rainwater shall be tested and inspected for flow…
(4) The drain on the rainwater catchment water system shall be checked for …
(5) The potable water system shall then be completely drained.
(6) The rainwater catchment water system shall then be activated and pressurized. *When rainwater is not available for the initial test, a temporary connection to a potable water supply shall be required. At the conclusion of the test, the temporary connection to the potable water supply shall be disconnected.*
(7) The rainwater catchment water system shall remain pressurized for …
(8) Fixtures, potable and rainwater catchment, shall be tested and inspected for …

(9) The drain on the potable water system shall be checked for flow during the …
(10) Where there is no flow detected in the fixtures which would indicate …

**1605.3.3 (Formerly 1602.11.2.3) Discovery of Cross-Connection.** In the event that a cross-connection is discovered, the following procedure~~, in the presence of the Authority Having Jurisdiction,~~ shall be activated immediately:

(1) Rainwater catchment water piping to the building shall be shut down at the …
(2) Potable water piping to the building shall be shut down at the meter.
(3) …
(4) …
(5) …
(6) The potable water system …

**Notation**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

**ITEM 16. BSC proposes to adopt the entire Chapter 17 from the 2018 Uniform Plumbing Code into the 2019 California Plumbing Code with new amendments as follows:**

## CHAPTER 17
## REFERENCED STANDARDS

### TABLE 1701.1
### REFERENCED STANDARDS

| STANDARD NUMBER | STANDARD TITLE | APPLICATION | REFERENCED SECTIONS |
|---|---|---|---|
| NSF/*ANSI* 350 -2014 | Onsite Residential and Commercial Water Reuse Treatment Systems<br>***Note:***<br>*NSF/ANSI 350, amended sections follow:*<br>***5.6 Electrical components****.*<br>*Electrical components…The California Electrical Code shall be followed for all electrical components, system installation, and* | Miscellaneous | ~~*1501.7*~~,<br>1506.7<br>~~*1504.10.2*~~<br>*1506.9.2* |

| | | | |
|---|---|---|---|
| | *system operation.* | | |

**Notation:**
Authority: Health and Safety Code Sections 18928, 18930.5, 18941.8
Reference: Health and Safety Code Section 18941.8, Water Code Section 14877.1

**ITEM 17. BSC proposes to adopt Appendix A, B, D, H, I, and J of the 2018 UPC without amendments.**

**Notation**
Authority: Health & Safety Code Sections 18928 and 18934.5
Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5